

Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>			<b>Complete if Known</b>		
			Application Number	09/605,520	
			Filing Date	June 27, 2000	
			First Named Inventor	Unger, Marc A.	
			Art Unit	1763	
			Examiner Name	Allan W. Olsen	
Sheet	1	of	5	Attorney Docket Number	20174C-000230US

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number Kind Code <sup>2</sup> (if known)			
	AA	US-2,620,938	12-09-1952	Jesnig	
	AB	US-2001-0033796 A1	10-25-2001	Unger et al.	
	AC	US-2001-0054778 A1	12-27-2001	Unger et al.	
	AD	US-2002-0029814 A1	03-14-2002	Unger et al.	
	AE	US-2002-0037499 A1	03-28-2002	Quake et al.	
	AF	US-2002-0144738 A1	10-10-2002	Unger et al.	
	AG	US-2002-0197603 A1	12-26-2002	Chow et al.	
	AH	US-2005-0112882 A1	05-26-2005	Unger et al.	
	AI	US-2005-0166980 A1	08-04-2005	Unger et al.	
	AJ	US-2005-0226742 A1	10-13-2005	Unger et al.	
	AK	US-3,495,608	02-17-1970	O'Keefe	
	AL	US-4,848,722	07-18-1989	Webster	
	AM	US-5,637,469	06-10-1997	Wilding et al.	
	AN	US-5,718,567	02-17-1998	Rapp et al.	
	AO	US-5,865,417	02-02-1999	Harris et al.	
	AP	US-5,876,675	03-02-1999	Kennedy	
	AQ	US-5,885,470	03-23-1999	Parce et al.	
	AR	US-5,958,694	09-28-1999	Nikiforov	
	AS	US-6,069,392	05-30-2000	Tai et al.	
	AT	US-6,174,675 B1	01-16-2001	Chow et al.	
	AU	US-6,508,988 B1	01-21-2003	Van Dam et al.	
	AV	US-6,709,604 B2	03-23-2004	Tai et al.	
	AW	US-6,793,753 B2	09-21-2004	Unger et al.	
	AX	US-6,899,137 B2	05-31-2005	Unger et al.	
	AY	US-6,929,030 B2	08-16-2005	Unger et al.	
	AZ	US-7,144,616	12-05-2006	Unger et al.	
	BA	US-			

FOREIGN PATENT DOCUMENTS								
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		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
	BB							

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	BC	AHN, CHONG H. et al., "Fluid Micropumps Based On Rotary Magnetic Actuators," Proceedings of 1995 IEEE Micro Electro Mechanical Systems Workshop (MEMS '95), Amsterdam, Netherlands, pp. 408-412, 1/29-2/2/1995	<input type="checkbox"/>	
	BD	ANDERSON, ROLFE C. et al., "Microfluidic Biochemical Analysis System," Transducers '97, 1997 International Conference on Solid-State Sensors and Actuators, Chicago, Illinois, pp. 477-480, 6/16-19/1997	<input type="checkbox"/>	
	BE	ANDERSSON et al., "Consecutive Microcontact Printing - Ligands For Asymmetric Catalysis in Silicon Channel," Sensors & Actuators B, Vol. 3997, pp 1-7, 2001	<input type="checkbox"/>	
	BF	BLOOMSTEIN, T. M. et al., "Laser-Chemical 3-D Micromachining," Mat. Res. Soc. Symp. Proc., Vol. 282, pp. 165-171, 1993	<input type="checkbox"/>	
	BG	BLOOMSTEIN, T. M. et al., "Laser-Chemical Three-Dimensional Writing Of Multimaterial Structures For Microelectromechanics," IEEE, pp. 202-203, 1991	<input type="checkbox"/>	
	BH	CARTER, CHARLES W. JR. et al., "Protein Crystallization Using Incomplete Factorial Experiments," Journal of Biological Chemistry, Vol. 254, No. 23, pp. 12219-12223, December 10, 1979	<input type="checkbox"/>	
	BI	CARTER, CHARLES W. JR. et al., "Statistical Design Of Experiments For Protein Crystal Growth And The Use Of A Precrystallization Assay," Journal of Crystal Growth, Vol. 90, pp. 60-73, 1998	<input type="checkbox"/>	
	BJ	CHAYEN, NAOMI E., "The Role Of Oil In Macromolecular Crystallisation," Structure, Vol. 5, pp. 1269-1274, October 15, 1997	<input type="checkbox"/>	
	BK	DUCRUIX A. et al., "Crystallization Of Nucleic Acids And Proteins - A Practical Approach," IRL Press, pp. 2 cover pages and 73-98, 1992	<input type="checkbox"/>	
	BL	GARCÍA-RUIZ, J. M. et al., "Agarose As Crystallization Media For Proteins I: Transport Processes," Journal of Crystal Growth, Vol. 232, pp. 165-172, 2001	<input type="checkbox"/>	
	BM	GARCÍA-RUIZ, J. M. et al., "Investigations On Protein Crystal Growth By The Gel Acupuncture Method," Acta Cryst., Vol. D50, pp. 484-490, 1994	<input type="checkbox"/>	
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	BN	JUÁREZ-MARTÍNEZ, G. et al., "High-Throughput Screens For Postgenomics: Studies Of Protein Crystallization Using Microsystems Technology," Analytical Chemistry, Vol. 74, No. 14, pp. 3505-3510, July 15, 2002	<input type="checkbox"/>	
	BO	JUDY, J.W., "Surface-machined micromechanical membrane pump." Micro Electro Mechanical Systems, 1991, MEMS '91, Proceedings. An Investigation of Micro Structures, Sensors, Actuators, Machines and Robots. IEEE 30 Jan-2 Feb 1991: <a href="http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=114792">http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=114792</a> .	<input type="checkbox"/>	
	BP	KAMHOLZ, ANDREW EVAN et al., "Quantitative Analysis Of Molecular Interaction In A Microfluidic Channel: The T-Sensor," Analytical Chemistry, Vol. 71, No. 23, pp. 5340-5347, December 1, 1999	<input type="checkbox"/>	
	BQ	KANE et al., "Finite element analysis of nonsmooth contact", <i>Computer Methods in Applied Mechanics and Engineering</i> , 180(1-2):1-26 (1999)	<input type="checkbox"/>	
	BR	KUNZ, R. R. et al., "Applications Of Lasers In Microelectronics And Micromechanics," Applied Surface Science, Vol. 79/80, pp. 12-24, 1994	<input type="checkbox"/>	
	BS	LIN, H. et al., "Convective-Diffusive Transport In Protein Crystal Growth," Journal of Crystal Growth, Vol. 151, pp. 153-162, 1995	<input type="checkbox"/>	
	BT	LÓPEZ-JARAMILLO, F. J. et al., "Crystallization And Cryocrystallography Inside X-ray Capillaries," Journal of Applied Crystallography, Vol. 34, pp. 365-370, 2001	<input type="checkbox"/>	
	BU	LUFT, JOSEPH R. et al., "Kinetic Aspects Of Macromolecular Crystallization," Methods in Enzymology, Vol. 276, pp. 110-131, 1997	<input type="checkbox"/>	
	BV	MCPHERSON, ALEXANDER et al., "Use Of Polyethylene Glycol In The Crystallization Of Macromolecules," Methods in Enzymology, Vol. 114, pp. 120-125, 1985	<input type="checkbox"/>	
	BW	MCPHERSON, ALEXANDER, "Crystallization Of Macromolecules: General Principles," Methods in Enzymology, Vol. 114, pp. 112-120, 1985	<input type="checkbox"/>	
	BX	MCPHERSON, ALEXANDER, "Crystallization Of Proteins By Variation Of pH Or Temperature," Methods in Enzymology, Vol. 114, pp. 125-127, 1985	<input type="checkbox"/>	
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	BY	MILLER, TERESA Y. et al., "A Comparison Between Protein Crystals Grown With Vapor Diffusion Methods In Microgravity And Protein Crystals Using A Gel Liquid-Liquid Diffusion Ground-Based Method," Journal of Crystal Growth, Vol. 122, pp. 306-309, 1992	<input type="checkbox"/>
	BZ	NASSUPHIS, N. et al., "Three-Dimensional Laser Direct Writing: Applications To Multichip Modules," J. Vac. Sci. Technol. B, Vol. 12(6), pp. 3294-3299, November/December 1994	<input type="checkbox"/>
	CA	NERAD, B. A. et al., "Ground-Based Experiments On The Minimization Of Convention During The Growth Of Crystals From Solution," Journal of Crystal Growth, Vol. 75, pp. 591-608, 1986	<input type="checkbox"/>
	CB	OAKLEY and Knight, " Adaptive dynamic relaxation algorithm for non-linear hyperelastic structures", <i>Computer Methods in Applied Mechanics and Engineering</i> , 126:67-89 (1995).	<input type="checkbox"/>
	CC	OGDEN, "Elastic Deformations of Rubberlike Solids", in <i>Mechanics of Solids</i> , pp. 499-537 (1982)	<input type="checkbox"/>
	CD	PHILLIPS, GEORGE N. JR., "Crystallization In Capillary Tubes," <i>Methods In Enzymology</i> , Vol. 114, pp. 128-131, 1985	<input type="checkbox"/>
	CE	Phillips, W.C. and Rayment, I. "A systematic method for aligning double focusing mirrors." <i>Methods in Enzymology</i> , 1985, Vol. 114 (Wyckoff, Hirs and Timasheff, eds.), 316-329, Academic Press.	<input type="checkbox"/>
	CF	SALEMME, F. R., "A Free Interface Diffusion Technique For The Crystallization Of Proteins For X-Ray Crystallography," <i>Archives of Biochemistry and Biophysics</i> , Vol. 151, pp. 533-539, 1972	<input type="checkbox"/>
	CG	SCHAFFER, CHRIS B. et al., "Laser-Induced Breakdown And Damage In Bulk Transparent Materials Induced By Tightly Focused Femtosecond Laser Pulses," <i>Meas. Sci. Technol.</i> , Vol. 12, pp. 1784-1794, 2001	<input type="checkbox"/>
	CH	THOMAS, B. R. et al., "Distribution Coefficients Of Protein Impurities In Ferritin And Lysozyme Crystals Self-Purification In Microgravity," <i>Journal of Crystal Growth</i> , Vol. 211, pp. 149-156, 2000	<input type="checkbox"/>

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	CI	UNDERWOOD et al., "Dynamic relaxation", in <i>Computational Methods for Transient Dynamic Analysis</i> , Belytschko and Hughes, eds., pp. 245-265, Elsevier Science Publishers, Amsterdam (1983).	<input type="checkbox"/>
	CJ	Webster's II Dictionary, p. 421, 1984	<input type="checkbox"/>
	CK	Wikipedia contributors. Anisotropy. Wikipedia, The Free Encyclopedia. February 27, 2008, 18:43 UTC. Available at: <a href="http://wikipedia.org/w/index.php?title=Anisotropy&amp;oldid=194466013">http://wikipedia.org/w/index.php?title=Anisotropy&amp;oldid=194466013</a> . Accessed March 7, 2008.	<input type="checkbox"/>
	CL	WOOLEY et al., "Functional Integration Of PCR Amplification And Capillary Electrophoresis In A Microfabricated DNA Analysis Device," <i>Anal. Chem.</i> , Vol. 68, pp. 4081-4086, 1996	<input type="checkbox"/>
	CM	WU, SHUYUN et al., "MEMS Flow Sensors For Nano-Fluidic Applications," <i>Sensors and Actuators A</i> , Vol. 89, pp. 152-158, 2001	<input type="checkbox"/>
	CN		<input type="checkbox"/>

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